

**TREATY ON INTERNATIONAL COOPERATION IN THE  
AREA OF PATENTS**

**PCT**

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(Article 36 and Rule 70 of the PCT)

Applicant's or Agent's File Ref. 41 398.re..nb	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of the International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/EP03/12918	International Filing Date (Month/Day/Year) November 19, 2003	Priority Date (Month/Day/Year) December 5, 2002
International Patent Classification (IPC) or National Classification and IPC C23D11/00		
Applicant SMS DEMAG AKTIENGESELLSCHAFT et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 pages, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., pages of the description, claims, and/or drawings which have been amended and are the basis for this report and/or pages containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 pages.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive activity, and commercial viability.
- IV ☐ Lack of unity of invention.
- V ☒ Substantiated determination under Rule 66.2 a(ii) with regard to novelty, inventive activity, and commercial viability; citations and explanations supporting such statement.
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the petition: June 22, 2004	Date of completion of this report: March 10, 2005
Name and mailing address of the office assigned to perform the preliminary examination: European Patent Office D-80298 Munich Tel: +49 89 2399-0 Tx: 523656 epmu d Fax: +49 89 2399-4465	Authorized Officer: Noske, W. Tel: +49 89 2399-8448

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International File No.: **PCT/EP03/12918**

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## I. Basis of the Report

1. With regard to the **constituent parts** of the international application (*replacement pages which were submitted to the application office in compliance with a request according to Article 14 are considered "originally filed" in the context of this report and are not attached to the report, because they do not contain any changes (Rules 70.16 and 70.17)*):

### Specification, pages:

1-6 as originally filed

### Claims, Nos.:

1-5 received on March 2, 2005 with correspondence dated February 28, 2005

2. With respect to the **language**, all the constituent parts marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise cited under this item.

The constituent parts were available or furnished to this Authority in the following language: . . . .  
which is:

- ☐ the language of a translation furnished for the purpose of international search (under Rule 23.1(b)).
  - ☐ the language of publication of the international application (under Rule 48.3(b)).
  - ☐ the language of the translation furnished for the purpose of international preliminary examination (under Rule 55.2 and/or Rule 55.3).
3. With regard to the **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
  - ☐ filed together with the international application in computer-readable form.
  - ☐ furnished subsequently to this Authority in written form.
  - ☐ furnished subsequently to this Authority in computer-readable form.
  - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - ☐ The statement that the information recorded in computer-readable form is identical to the written listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description,                      pages:
- ☐ the claims,                              Nos.:
- ☐ the drawings,                          sheets/figures:

5. ☐ This report has been prepared as if (some of) the amendments had not been made, since for the specified reasons they are considered by this Authority to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Any additional remarks:

**V. Substantiated determination according to Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination.**

1. Determination

Novelty (N)	Yes: Claims 2-4
	No: Claims 1, 5
Inventive Activity (AI):	Yes: Claims
	No: Claims 1-5
Commercial Viability (CV):	Yes: Claims 1-5
	No: Claims

2. Documents and Declarations

**See attached page.**

1. **D1** EP 829 548 A, Abstract and Column 3, Lines 27-35, describes

(i) a method for automatically controlling the water cooling in an installation for hot rolling hot strip or plate made of steel in the austenitic temperature range,

(ii) wherein the speed and the temperature of the rolling stock are measured as it leaves the last rolling stand, and

(iii) depending on the measured values that are obtained, the cooling rate or the amount and distribution of the cooling water on the rolling line or cooling line are varied

(iv) with the use of a process model and a TTT diagram as the microstructural model for the purpose of achieving the desired microstructure of the finished product.

The method model is adapted in the event of deviation from the desired microstructure.

2. Since the final rolling temperature is predictive of the resulting microstructure, **D1** anticipates all features of Claims 1 and 5 and constitutes a bar as to novelty.

It should be noted that deviations from the desired microstructure naturally must likewise be determined in **D1** during the process (implicit disclosure).

The detection of the value that provides information about the metallic microstructure “at the end of or during the corresponding method process” obviously must also apply to the control method of **D1**.

3. Dependent Claims 2-4 contain only optional measures, which cannot be essential for the solution of a shared obvious problem. Therefore, these claims contain nothing that is inventive.

4. A positive judgment might be possible for an amended Claim 4, in which it was more precisely specified where, when, and on what material or on what microstructural constituent the grain size is measured and how exactly the temperature and the course of a microstructural transformation to be precisely specified with respect to the material are measured.